

Paulding Soil & Water Conservation District

2017-2018

Educational Programs

**Programs are FREE to be presented to all schools and
community groups in Paulding County**

*Our Mission: To promote the wise use of our natural resources in order to
enhance the environment and quality of life for the people of Paulding County.*

Paulding SWCD

900 Fairground Dr. Suite B

Paulding, OH 45879

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Email: patrick.troyer@pauldingswcd.org

2017-2018 School Year

Dear Educator,

The Paulding Soil & Water Conservation District has a variety of educational presentations and activities available to be presented in your classroom, **Free of Charge (with exception of purchasing owl pellets for 5th grade owl program)**, that align with Ohio State Board of Education Standards. These are generally science related; however, we do have programs which incorporate math, social studies/civics, and language arts standards as well. Take note of some of the new programs that are available for this year!

Please note page 3 is a list of all presentations offered at the time this book is put together. Brief program descriptions along with estimated time of presentations are found throughout this booklet. Presentations are categorized by grade level, but these are simply suggestions based on standards for the specific grade level. Pages 4-5 contain new programs for this year that can fit with multiple grade levels. All presentations can be adapted to your specific grade level and meet the needs of your students.

To schedule a classroom program please contact Patrick Troyer, Education Specialist at Paulding SWCD via phone or email. If there is a specific topic area that you wish to have presented that isn't listed in this book, please contact Patrick to develop a program to fit your needs.

The Paulding SWCD wants to focus its efforts on presenting and reinforce the conservation message through educational programming and outreach. I look forward to working with each one of you and your students this year!

Sincerely,

Patrick Troyer

Education Specialist

Paulding SWCD

Paulding SWCD

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2017-2018 Paulding SWCD Summary of Programming

*Below is a brief snapshot of programs that will be offered to your classrooms. Refer to the page number beside each program for detailed program descriptions. *

Pre-K & Kindergarten:

- Ohio Wildlife (Page 6)
- Animal Hibernation (Page 6)
- OH Deer! (Page 6)
- Owls (Page 6)
- Birds (Page 6)
- Thunder in a Cup (Page 7)
- Farmers & Farming (Page 7)
- Don't Use it All Up! (Page 7)
- The Worm Farm (Page 7)

First Grade:

- Every Tree for Itself! (Page 8)
- The Incredible Journey (Page 4)
- What's Wild? (Page 8)
- Terrific Turkeys (Page 8)
- Don't Croak! (Page 8)

Second Grade:

- Vermicomposting (Page 9)
- Ohio Wildlife (Page 9)
- Weather & Climate (Page 9)
- Power to the Pollinators! (Page 9)

Third Grade:

- Adapting to Change (Page 10)
- Soils (Page 10)
- Renewable or Not? (Page 10)
- Rock On! (Page 11)

Fourth Grade:

- Sinkhole in a Cup (Page 12)
- Macroinvertebrate Mayhem (Page 12)
- Fossils (Page 12)
- Streamulator (Page 12)
- Wildlife CSI (Page 12)

Fifth Grade:

- Vermicomposting (Page 13)
- Owl Pellets (Page 13)
- Just Passing Through (Page 13)
- Sum of the Parts (Page 13)
- Dig Those Chips (Page 14)
- Food Web (Page 14)

Sixth Grade:

- Dig Those Chips (Page 15)
- Streamulator (Page 15)
- Soils (Page 15)
- Water Quality: Ask the Bugs! (Page 15)
- Geology (Page 15)

Multiple Grades (Pg. 4-5): Incredible Journey, Wetlands Enviroscope, Nonpoint Source Pollution Enviroscope, Drinking Water Enviroscope, 4R Lake

2017-2018 Featured Programs for All Grades:

The Incredible Journey

Students will learn about how the water cycle works. They will learn there is a limited amount of fresh water available and how the water cycle is a continuous process. The students will go on an incredible journey through the water cycle as a water droplet. Critical thinking skills will be used to understand how they traveled through the water cycle.

As an activity, students are given a pipe cleaner that will be used as a bracelet which they will add beads to as they go through the activity. The students will start with a yellow bead to represent the sun and collect different colored beads as they move throughout the cycle which represent the places a water droplet could visit such as: groundwater, ocean, lake, river, animal, plant, cloud, soil and glaciers. The students will roll a cube with each of the above stations and follow the directions on where to go next on their water cycle journey.



Estimated Time: 30 Minutes

NEW ENVIROSCAPE: WETLANDS



In this presentation, students will gain an understanding on the characteristics of wetlands as well as learn about and appreciate the vital functions wetlands serve to the environment for both humans and animals. In this program, students will view the Wetlands Enviroscope Model where they will visualize the functions of wetlands and the benefits they provide to the environment. The Wetlands Enviroscope Model demonstrates the human activities which may negatively affect wetlands and allow students to experiment

with methods that can help conserve and protect them. Also, the Wetlands Enviroscope demonstrates the water absorption and water holding capacity of wetlands, all students to visually experience the improvement in water quality, experiment with the impact of wetlands or the lack of wetlands upon flooding and erosion, understand the function of constructed wetlands.

Estimated Time: 40 Minutes

NEW 4R LAKE: A GLIMPSE AT WATER QUALITY (STEM Program)

We all enjoy fresh, clean water, not only for nourishment, but for recreation and many other uses in our daily lives. This program and the demonstration that follows will help to serve as a reminder to all of us of the simple things that we can do to help keep our waterways clean. Students will start out with a small baggie with a “clean lake” which will not stay clean for long. Over the program, we will see grass clippings, fertilizer, pet wastes, and soap/car chemicals make their way to the lake, but we are not done! Also affecting the water quality of our lake will be sunshine and wind which mix up all the pollutants.

How is the water quality now? Students will be able to take their “lake” home and wear it as a necklace with some reminders on how to keep our waterways clean.



Estimated Time: 30 Minutes



Finished Lake in a Bag Product

2017-2018 Featured Programs for All Grades:

ENVIROSCAPE MODEL: NON-POINT SOURCE POLLUTION

Students see first-hand how everyone plays their individual part in the health of our waterways through the Non-Point Source Enviroscape Model. Different pollutants such as manure, soil, fertilizer, pesticides, motor oil, and many more are introduced to the environment. Students see how this pollution spreads when a big rainstorm comes and pollutes the rivers and streams to become runoff. See detailed program description under 5th Grade, although this can be tailored to your particular grade.



Estimated Time: 40 minutes

NEW ENVIROSCAPE MODEL: DRINKING WATER & WASTEWATER SYSTEMS



Do you know where your water comes from and how it is treated? The Drinking Water/Wastewater Enviroscape Model traces the path of the water we use in our communities. Real water is drawn from the river and enters the water treatment plant processes, then clean water is delivered for residential and commercial uses and wastewater is sent for treatment with treated water returned to the river. Students will be able to gain an understanding of the processes involved with the treatment of water from the time it is drawn at the source, reaches their homes, and the discharge of water back into nature following treatment and about groundwater resources.

Estimated Time: 40 minutes



*If there is a topic you would like covered that is not listed, let me know and I can set something up for you! *

Programs are available for any grade level and are adjusted accordingly to your standards

Email: patrick.troyer@pauldingswcd.org Phone: 419-399-4771

PRESCHOOL/KINDERGARTEN:

OHIO WILDLIFE



Students learn about the physical characteristics of 10-15 different wildlife animals found in Ohio through an interactive program learning interesting facts about each animal. Once the presentation is complete, students get the opportunity to view many different furs and pelts. This includes the hand-on learning through the visual identification and the ability to feel and touch the different wildlife creatures.

Estimated Time: 30 Minutes

ANIMAL HIBERNATION

What does wildlife do in the winter? How do they survive and stay warm? Do they all hibernate through the winter? How do they prepare for hibernation? What is hibernation? These questions and more are answered in an interactive program on ways wildlife prepare for and survive the winter. Students will learn about the Black Bear, Coyote, Skunk, Rabbit, Opossum, Raccoon, and White-Tailed Deer and have the opportunity to feel and touch fur samples of each species. At the end of the program, students will have the opportunity to make their own simple black bear craft (pictured at right) to take home with them!



Estimated Time: 30 Minutes

NEW OH DEER!



All animals need food, water, shelter, and space to survive. While each species has specific requirements for suitable types or amounts of these four things, all animals need food, water, shelter, & space to survive. Students will explore each of these four requirements as they relate to the White-Tailed Deer. Students will partake in an activity called “Oh Deer” which is a simulation game where some students become “deer” and remaining students will represent each of the components of habitat. This activity emphasizes the most essential things that animals need to survive and the obstacles that can hinder an animal’s ability to get them. This game will also show how animal populations increase and decrease from year to year and what happens when an animal does not get what they need to survive.

Estimated Time: 30 Minutes

NEW OWLS

Did you know that there are over 12 species of owls that can be found right here in Ohio and that they are great at catching mice/rats? Students will learn these facts and so much more when they explore the world of owls through this interactive program. Focuses of this program will be things the owl eats (prey) as well as how the owl is a predator, its habitat needs, and benefits of owls to the environment. As part of this program, students will be able to make their very own owl!



Estimated Time: 30 Minutes

NEW BIRDS



Students will learn about the different features & characteristics of some of our bird species. This program will cover how birds get the food they need with their beaks adapted to what they eat, habitat needs of birds, among many topics. Students will then have the opportunity to become birds and use their “beaks” to gather food for their young in a Worm Relay Activity!

Estimated Time: 30 Minutes

PRESCHOOL/KINDERGARTEN:

THUNDERSTORM IN A CUP



Students will begin to build a solid foundation on important concepts relating to weather and climate. This program touches on a wide variety of topics such as seasons, weather/climate, ways we observe/measure weather, who tells us about the weather, and most importantly safety during severe weather events such as thunderstorms. Students will learn the basics of thunderstorms and will act out how a thunderstorm works! After acting out their own thunderstorms, everyone will then make their very own Thunderstorm in a Cup as shown in the picture on the left to understand the parts of a thunderstorm.

Estimated Time: 30 Minutes

WORM FARM

Students learn about the different features and characteristics of red worms. The Education Specialist will bring in a worm composting bin and students will get to touch live red worms and learn about composting and the benefits it provides to our environment. Students will then have the opportunity to partake in a relay game utilizing their fine motor skills where they become birds and transfer worms (pipe cleaners) to their nests using their beaks (clothes pin) to feed their hungry baby birds.



Estimated Time: 30 Minutes

FARMERS AND FARMING



Discussion about farmers and the equipment they use to farm. A basic understanding of how a healthy soil is important to provide us with food will be given. Students will be read a book called "Farmers Feed the World." Students will then get to play a version of the pin the tail on the donkey, but with a tractor twist: Pin the Wheels on the Tractor!

Estimated Time: 30 Minutes

DON'T USE IT ALL UP (WATER)

Did you know that water covers 71% of the Earth's surface? Is this water all available for us to drink? Students will learn about how they use water every day as well as ways to help conserve our natural resources for the future. There will be a hands-on demonstration of how water is used by having student drop sponges into a bowl of water and remove the sponges and place them into another bowl of water. Will the water level be the same? How can they reduce, reuse, and recycle water?



Estimated Time: 30 Minutes

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First Grade:

EVERY TREE FOR ITSELF

Students will learn about the different parts of a tree and what a tree needs to grow in order to survive. Students examine pieces of tree slabs and identify the growth rings which help us identify the age, life history, and health of a tree. Next, each student will get a paper plate and they will draw their growth rings to represent their age (ex. 6 rings for a 6-year-old). Students will now become trees in an activity called "Every Tree for Itself". The students will stand on their cross-sections about three feet apart. Colored chips will be placed on the floor around students. This activity will allow students to learn the difficulty that comes when trees are attempting to get the sunlight, nutrients, and water they need to grow.



Estimated Time: 30 Minutes

DON'T CROAK (FROGS)



Students learn about the physical characteristics of a frog. This includes explanation of the frog's tongue, their feet, how they breathe, and shed their skin. There are discussion questions about the four characteristics of a habitat that all living things need. Students are asked what those characteristics are such as food, water, shelter, and space. Each student is transformed into a frog and is given a party blowout with a Velcro end to represent the frog's tongue. Students are instructed that frogs don't use their legs to capture food, so students can't use their hands only their tongue (party blowout) to capture their prey. Will the frogs get all the requirements they need to survive or will they "croak"? Book this program and find out!

Estimated Time: 30 Minutes

NEW WHAT'S WILD?

Students engage in stories comparing the lives of a wild and a tame animal and sort animals into categories. This program is designed to help children distinguish between animals that are wild and those which are not wild. A wild animal is one that can take care of itself and survive on its own without relying on humans. Animals that are not wild are called domesticated animals. All animals need food, water, shelter and protection; the importance of habitat for wild animals is emphasized. Students will also learn to recognize that wildlife occurs in a variety of forms in nature.



Estimated Time: 30 Minutes

NEW TERRIFIC TURKEYS



Turkeys are familiar to most people as a food that we eat, particularly around Thanksgiving. Turkeys sold at the grocery store and raised by farmers are domesticated turkeys while those found in nature are called wild turkeys. Wild turkeys differ in a wide variety of ways compared to the domesticated turkey. The essential habitat requirements for organisms to survive as well as predator/prey will be introduced through this program. As an activity, students will play a game in which they pretend to be either a tom (male) or hen (female) turkey in which they try to get one food and one water in order to survive the day. Students will be asked what eats wild turkeys and a predator will be introduced into the activity. Will the turkeys survive the day and get the one food and one water they need with predators around?

Estimated Time: 30 Minutes

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Second Grade

OHIO WILDLIFE



Students learn about the physical characteristics of over 20 different wildlife animals found in Ohio through an interactive PowerPoint presentation. Once the presentation is complete, students get the opportunity to view many different furs and pelts. This includes the hand-on learning through the visual identification and the ability to feel and touch the different wildlife creatures.

Estimated Time: 45 Minutes

VERIMOCOMPOSTING (WORMS)

Students will learn about the physical characteristics of a red worm. They will learn about their habitat in the worm bin and what they need to survive. Vermicomposting is the process of using worms (“vermin” is Latin for worm”) to process organic food waste into a nutrient-rich soil. Students get to experience worms up close and personal. The students will get to learn about how to construct a worm bin. They will learn about what worms like to eat and how they are able to eat the rotting food and reuse it as a natural fertilizer for plants. Students will get to hold their own red worm and be asked to draw upon the knowledge they have learned to write a short biography about their worm giving it a name, the color, length, and what their worm likes to eat.



Estimated Time: 30 Minutes

NEW WEATHER & CLIMATE



Weather is a result of energy change. Heating and cooling of water, air and land via sunlight are directly related to wind, evaporation, condensation, freezing, thawing and precipitation. Weather patterns (long-term) and fronts (short-term) can be documented through consistent measuring of temperature, air pressure, wind speed and direction, and precipitation. In this program, students will learn all about weather/climate, tools used to measure weather conditions, how the seasons occur, and much more. They will learn that water is present in the air as clouds, steam, fog, rain, ice, snow, sleet or hail. When water in the air cools it forms small droplets of water that can be seen as clouds.

Estimated Time: 30 Minutes

NEW POWER TO THE POLLINATORS!

Did you know that 75% of the foods you enjoy on a daily basis are reliant upon pollinators such as the Monarch Butterfly in order to grow? Through this program, students will understand that human interaction with the environment impacts the health of other living things as well as how living things rely on one another in order to survive. Students will learn why pollinators are important to us, how the process of pollination works, examples of pollinators and who they are, as well as simple ways to create habitat at home or school to help these important creatures survive. To help build on concepts, students will take part in activity called “Pollinator Pizza” they will build their own pizza with their favorite toppings. They will learn the foods that are reliant on pollinators such as peppers or tomatoes. Students will see that when pollinators disappear, many of their favorite toppings will also disappear!



Estimated Time: 30 Minutes

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Third Grade:

SOILS MODEL

Students will learn about how soil develops through weathering and erosion which plays a key role in the formation of soil particles. Students will be given characteristics of the three main soil types which are sand, silt, and clay. Soil is full of life and contains different organisms such as earthworms or bacteria which help enhance the properties of soil. There is a short video at the end of the presentation reviewing the different elements of soil and how it is formed. Students will be able to create their own model soil to take home with them which will become science clay or playdough.



Estimated Time: 30 Minutes

NEW ADAPTING TO CHANGE



An adaptation is a change or the process of change by which an organism or species becomes better suited to its environment. Some animals adapt to their environment such as dry conditions with the camel or cold conditions such as hibernation in bears. In this program, students will learn about an animal that has a wide range of adaptations to help it become better suited to its environment. This program covers the beaver and its many adaptations such as its tail, waterproof fur, clear eyelids, & webbed feet for swimming, and large front teeth for chopping trees; just to name a few. Not only will students learn about the amazing adaptations of the beaver, but they will get the opportunity to experience them first-hand! A volunteer will be asked to come up and dress up like a beaver and wear/hold a representation of each adaptation such as goggles for the clear eyelids, a fur coat, swimming fins for webbed feet; and so much more!

Estimated Time: 30 Minutes

NEW RENEWABLE OR NOT?

Many of Earth's resources can be used for the energy they contain. Renewable energy is an energy resource such as wind, water or solar energy, that is replenished within a short amount of time by natural processes. Nonrenewable energy is an energy resource, such as coal or oil, that is a limited energy source that cannot be replenished in a short amount of time. Through this program, students will learn the difference between a renewable and nonrenewable resource and why our natural resources need to be conserved as well as ways we can work to conserve them. Students will partake in an activity where they learn how to distinguish the difference between the resource types and what happens when resources are no longer available.



Estimated Time: 30 Minutes

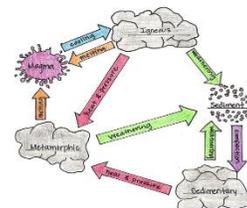
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Third Grade:

NEW ROCK ON!

What is the difference between igneous, metamorphic, and sedimentary rocks? In this program, students will explore the rock cycle and investigate properties associated with various rocks. Rocks have unique characteristics that allow them to be sorted as well as classified and they form in different ways. They will view samples of rocks that can be found around the area and investigate their properties through hands-on activities.

The Rock Cycle



Estimated Time: 30 Minutes



OHIO RESOURCES

Programs are available for any grade level and are adjusted accordingly to your standards

Email: patrick.troyer@pauldingswcd.org Phone: 419-399-4771

IT'S OIL AND WATER
IT'S IN OUR NATURE.

Fourth Grade:

NEW SINKHOLE IN A CUP

Sinkholes are natural depression in the landscape caused by solution and subsidence of earth materials. They are formed by the removal of underlying material (subsurface rock and soil) through the karst hydrologic system. A basic understanding of where & how sinkholes form, various types of sinkholes, effects of sinkholes, and stories of people impacted by sinkholes. Weathering and erosion are also discussed. Students will get a hands-on experience of learning how sinkholes form by creating their own sinkholes using a cup, sugar, sand, and water!



Estimated Time: 30 Minutes

NEW MARCO MAYHEM



Students will learn about the characteristics of macro-invertebrates as well as the different groups they are classified under to help determine water quality. The students will get to look at many different macro invertebrates and learn about what and how they consume their food. After the presentation, students will get to play a game of Macro Simon Says.

Estimated Time: 30 Minutes

NEW FOSSILS

What are fossils and how are they made? Fossils provide evidence that many plant and animal species are extinct and that many species have changed over time. The types of fossils that are present provide evidence about the nature of the environment at a specific point in time. As the environment changed, so did the types of organisms that could survive in that environment. Students will explore the world of fossils and fossil formation and be able to make their own fossils!



Estimated Time: 30 Minutes

STREAMULATOR: HOW DOES MY STREAM ERODE THE LANDSCAPE?



There are many different processes that continually build up or tear down the surface of Earth. These processes include: erosion, deposition, volcanic activity, earthquakes, glacial movement, and weathering. The students will learn about how erosion, deposition, and weathering can cause changes in landscapes and land forms via an interactive program with our Streamulator table. The Streamulator also allows students to simulate the changes that occur in natural streams via erosion/weathering as well as how streams form. The use of sand and flowing water allows the students to visually see the effects of flowing water through sediment transport, delta formation, erosion and deposition. Students will have the opportunity to work together to build their own stream and community to see if it can survive when a large flood comes into their community!

Estimated Time: 40 Minutes

NEW WILDLIFE CSI

Who “murdered” the Eastern Cottontail Rabbit? During this program, students will work in groups try to troubleshoot/ solve this mystery while taking on the role of various animals learning about their life histories, visiting the scene of the crime, and questioning one another to discover who they believe is guilty of murder. This program will highlight predator/prey relationships as well as learning about the various wildlife and their lifestyles. So, who “murdered the rabbit? Book this program and find out!



Estimated Time: 30 Minutes

Fifth Grade:

OWL PELLETS



Students learn about what owl pellets are, how they are used in the scientific study of small mammals, and their distribution. We will first cover general information about the owls including their behavior, diet, habitat, and formation of pellets. Students will view a short video about owl pellets. Then each student is given an owl pellet, a pair of gloves, tweezers, and a chart displaying the common animals consumed by owls. Students examine the owl pellets, reconstruct prey skeletons, and hypothesize food sources of the prey. This program does have a cost of \$2.50 per pellet or you may order them through your school (whichever is more convenient for you).

Estimated Time: 45 Minutes

SUM OF THE PARTS:

Students will learn about one way that organisms change their environment. They will learn how everyone plays a part in the pollution of a river as it makes its way through the watershed and that every single individual or group can do their part to prevent pollution from reaching the river or stream. A brief presentation will explain the concepts of point source pollution, nonpoint source pollution, best management practices, runoff, and erosion. Students see first-hand how everyone plays their individual part in the health of our waterways through the Non-Point Source Enviroscape Model. Different pollutants such as manure, soil, fertilizer, pesticides, motor oil, and many more are introduced to the environment. Students see how this pollution spreads when a big rainstorm comes and pollutes the rivers and streams to become runoff.



Estimated Time: 30-40 Minutes

NEW JUST PASSING THROUGH:



Students will learn about erosion and water movement in a whole new way through this activity! They will get an overview of what erosion is, why it is bad, how plants can help prevent it. Students will have the opportunity to investigate how vegetation influences the movement of water over land surfaces and learn how to determine the best practices that can be used to prevent it.

Students will act out water as it flows through a site and be broken up into two groups, “raindrops” or “plants”. The “raindrops” will meander towards the stream picking up sediment (poker chips) along the way. When the “raindrops” run into a “plant” they will circle the plant five times and drop one piece of sediment each turn. The goal is to see how much sediment (poker chips) the water droplets collect once they reach the stream as well as how plants help to prevent pollution, nutrients, and sediment from reaching streams.

Estimated Time: 40 Minutes

Programs are available for any grade level and are adjusted accordingly to your standards

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FIFTH GRADE cont.

***NEW* DIG THOSE CHIPS**



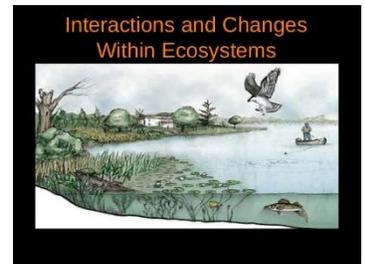
This program combines Social Studies and Science concepts into one presentation. Emphasis will be put on the fact that soil forms the very foundation of our economy as many industries such as agriculture, forestry, and clothing are heavily dependent on a healthy soil to have resources to bring their products to the market. Students will learn that regions and countries become interdependent when they specialize in what they produce best and then trade with other regions to increase the amount and variety of goods and services available to the consumer.

This program also covers the basics of how a market works and other terms such as supply/demand, competition, advertising, producer, consumer, market. The students will learn about how potatoes are grown from planting to harvesting to consuming potato chips. They will conduct their own taste test of potato chips and think like a consumer deciding which chip to buy based on price, product quality, brand, and advertising.

Estimated Time: 45 Minutes

***NEW* ALL IN THIS TOGETHER (Food Webs & Ecosystem Interactions)**

Each animal has a role in the community that is called a niche. The niche involves things such as where and how an animal gathers its food, its role in the food web, what it gives to and does for the community, its behavioral habits and so much more. Discussion will be held on how organisms serve their ecosystem as a producer, consumer, scavenger, or decomposer. Within any biological community, there are numerous relationships and interdependences between plants/ plants, plants/ animals, and animals/animals. Just as important as these relationships is a suitable habitat in order to survive. These relationships are important to maintain for an ecosystem, and students will get to see how important they are through an interactive activity called "Good Buddies".



Estimated Time: 40 Minutes

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SIXTH GRADE

DIG THOSE CHIPS-6TH GRADE

THE NATION
THAT
DESTROYS
ITS SOIL,
DESTROYS
ITSELF. -
FRANKLIN
DELANO
ROOSEVELT
#SOIL
#SAVOUOTABLE

This program combines Social Studies and Science concepts into one presentation. The 6th grade program will focus on why trade occurs when individuals, regions, and countries specialize in what they produce and identify goods/services which are imported and exported while explaining how such trade makes countries become interdependent. This program also covers the basics of how a market works and other terms such as supply/demand, competition, advertising, producer, consumer, market. Students will learn about how potatoes are grown from planting to harvesting to consuming potato chips. They will conduct their own taste test of potato chips and think like a consumer deciding which chip to buy based on price, product quality, brand, and advertising.

Estimated Time: 40 Minutes

STREAMULATOR: DIGGING DEEPER ON WEATHERING & EROSION

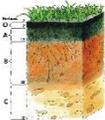
Earth's surface is undergoing constant change daily due to forces such as weathering and erosion. Weathering is breaking up the rocks and minerals on the surface while erosion is taking that material and depositing it in a new location. The students will learn about how erosion, deposition, and weathering can cause changes in landscapes and landforms via an interactive program with our Streamulator table. The use of sand and flowing water allows the students to visually see the effects of flowing water through sediment transport, delta formation, erosion and deposition. With this model, students will have the opportunity to identify the parts of a stream in addition to understanding the function associated and visualize the immense power of water as it cuts its way through the landscape.



Estimated Time: 35 Minutes

SOILS

Soil formation occurs at different rates and is based on environmental conditions, type of existing bedrock, and rates of weathering. Soil forms in layers called horizons which have varying properties among them that can be measured. Students will identify the types of conditions which may contribute to the formation or lack of formation of the soil. Students will also learn how soil has common & practical uses. This program will also allow students to be able to measure important soil properties such as texture, color, porosity, and how these properties determine the soil's use through an interactive activity.



Estimated Time: 30 Minutes

UNDERSTANDING OUR GEOLOGY

This program focuses on the study of rocks and minerals which are two components that make up the lithosphere. In this program, students learn that igneous, metamorphic, and sedimentary rocks have specific properties and form in different ways in addition to reviewing the rock cycle. We will also look at Ohio specific geology, including geologic maps and Ohio geologic history. Students will learn how classifying and identifying different types of rocks, and minerals can decode the past environment in which they formed through a hands-on activity putting their investigative skills to test.



Estimated Time: 30 Minutes

Programs are available for any grade level and are adjusted accordingly to your standards

Email: patrick.troyer@pauldingswcd.org Phone: 419-399-4771

BLACK SWAMP NATURE CENTER TOURS & FIELD DAYS

Wonderful field trip opportunity for any age group! There are mounted birds and fish in the building. Well-kept trails and yards for site seeing outdoors. Discover nature at its fullest and have fun doing it by going on a scavenger hunt to find some treasures! In the past, we have done mini field days for classrooms with a few activities and a nature center scavenger hunt.

Approximate Time: Open

If you have an idea for a specific program that is not listed in this program, please feel free to contact the Paulding SWCD office at 419-399-4771 or email Patrick Troyer at patrick.troyer@pauldingswcd.org.

Additional information:

- Project Wild School Site Grants
- *Our office is willing to assist you in writing grants.*
- *We are also available for assistance with projects after grants are accepted.*
- *SWCD Staff is available for workshops, seminars, and training for you and your staff.*

